OVERVIEW: How to Help Your Students Become Better Critical Thinkers

Live webinar
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Today’s speakers

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• Define critical thinking
• Identify common student strengths and weaknesses
• Recognize effects of student cognitive development
• Explore models and effective teaching and learning strategies
• Discussion/Questions

One Way to Identify Critical Thinking
Objectives:
Pathways Vision Model
Source: https://linktr.ee/AICPA
QUESTION: Why Focus on Cognitive Development?
Stages of Adult Cognitive Development
Based on Students’ Assumptions About Knowledge

Based on definitions, data, and concepts from King & Kitchener’s reflective judgment model. The five stages shown in the diagram correspond to reflective judgment stages 3, 4, 5, 6, and 7 and omit pre-adult performance.

KEY Beliefs That Hinder Progress to Next Stage

At Each Stage: Students will not develop higher-stage critical thinking skills until beliefs change
How Do Student Beliefs Translate Into Critical Thinking Performance?

Figure 20: Critical Thinking Skills Rubric for Stages 1, 2, 3, and 4, Guide p. 36

<table>
<thead>
<tr>
<th>Component of Critical Thinking Model</th>
<th>Stage 1 Little/No Critical Thinking (Confused Fact-Finder)</th>
<th>Stage 2 Partial Critical Thinking (Biased Jumper)</th>
<th>Stage 3 Emergent Critical Thinking (Perpetual Analyzer)</th>
<th>Stage 4 Competent Critical Thinking (Pragmatic Performer)</th>
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<tbody>
<tr>
<td>Identify</td>
<td>• Recites purpose as given, or</td>
<td>• Identifies the clearly-evident problem</td>
<td>• Identifies the main purpose</td>
<td>In addition to Stage 3:</td>
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<td>• Identifies an inappropriate problem</td>
<td>• Recognizes that the problem is open-ended/ambiguous</td>
<td>• Identifies relevant stakeholders and their possible goals/preferences</td>
<td>• Identifies important embedded, subsidiary problem(s)</td>
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<td>Analyze</td>
<td>• Applies calculations, definitions, or other “textbook” concepts</td>
<td>• Applies and describes the effects of relevant calculations and/or concepts</td>
<td>• Thoroughly and objectively applies and interprets relevant calculation(s) and concept(s)</td>
<td>• Objectively analyzes the most important relevant information, implications, consequences and viewpoints</td>
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<tr>
<td></td>
<td>• Presents irrelevant information</td>
<td>• Partially analyzes alternatives, focusing on information supporting own viewpoint</td>
<td>• Explores causes, stakeholder effects and interrelationships</td>
<td>• Evaluates the quality of information and assumptions, and adapts interpretations (as needed)</td>
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<tr>
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<td>• Misinterprets calculation(s) and/or concept(s)</td>
<td>• Discounts other viewpoint(s)</td>
<td>• Questions the quality of information and assumptions</td>
<td>• Summarizes the most important pros and cons of viable alternatives</td>
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<tr>
<td>Conclude</td>
<td>• Instead of a conclusion, provides facts, definitions, or other “authoritative” statements</td>
<td>• Reaches a biased conclusion that is consistent with analyses</td>
<td>• Reaches no conclusion, or Provides a conclusion with little or no justification</td>
<td>• Identifies/develops appropriate criteria, and uses the criteria to reach convincing conclusion(s)</td>
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<td>• If appropriate, provides value-added advice (e.g., identifies implementation issues)</td>
</tr>
</tbody>
</table>
"Ideal" Progression vs. Typical Progression

How Can We Achieve Faster Critical Thinking Growth?
Critical Thinking Model

Teach your students a critical thinking model, and use it repeatedly.

Figure 2, Guide p. 6

Developmental Feedback

Provide students with feedback pointing to next-stage improvements (e.g., use a rubric).

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Design Your Course to Explicitly Focus on Critical Thinking

Assignment Design Considerations for Stage 1 (Confused Fact-Finder)

Stage 1 student should learn to:
1. Identify existence of ambiguities/uncertainties that prevent a single "correct" answer
2. Recognize that multiple perspectives are valid
3. Form own conclusion and support it with evidence/arguments

Learning objective #1 is essential. Until students can identify uncertainties, they will be unable to achieve the other two objectives.

Critical Thinking Competencies/ Learning Objectives

Learning Activity Questions/ Requirements

Students' Critical Thinking Stage(s)

Problem Complexity, Context, and Uncertainty

Problems should contain (Pathways Vision Model):
- Straightforward, easily understood events and circumstances
- A few sources of uncertainty
- Few accounting judgments
- Information that is either useful or not useful (i.e., relevant or not relevant)
- Few stakeholders and uncomplicated decisions
- Few consequences and clear-cut cause and effect relationships
Homework, group discussion and/or exam

- Ask students to explain why some aspect of a situation is uncertain
- Such as:
  - Collectability of accounts receivable
  - Forecast of costs

Example for Stage 1
Students

Assignment Design Considerations for Stage 2 (Biased Jumper)

Stage 2 student should learn to:
1. Delay judgment until thorough analysis is completed
2. Identify and control biases that interfere with objective and thorough critical thinking
3. Conduct thorough, high-quality analyses from multiple viewpoints

Learning objective #1 is critical. Until students delay judgment, they will continue to focus on their own biased point of view and perform only partial analyses.

Critical Thinking Competences/ Learning Objectives

Learning Activity Questions/ Requirements

Students’ Critical Thinking Stage(s)

Problem Complexity, Context, and Uncertainty

At Stage 2, students believe that it is sufficient to stack up arguments to support one’s own position

Problems may contain (Pathways Vision Model):
- Moderate scope and interaction of events and circumstances
- Multiple sources and degrees of uncertainty
- Several accounting judgments
- Questions about the degree of information usefulness
- Multiple stakeholders and decisions involving multiple factors
- Some uncertain cause and effect relationships
Graded homework and/or exam

- Place significant grade weight on thoroughness of analysis
- Place little grade weight on existence of conclusion

Example for Stage 2 Students

Assignment Design Considerations for Stage 3 (Perpetual Analyzer)

- Learning objective #1 is critical. Until students learn how to identify what is most important, they will continue to struggle reaching a conclusion.
- Critical Thinking Competencies/ Learning Objectives
- At Stage 3, students believe that supporting one conclusion denies the legitimacy of other viewpoints
- Students’ Critical Thinking Stage(s)
- Problem Complexity, Context, and Uncertainty
- Learning Activity Questions/ Requirements
- Problems may contain (Pathways Vision Model):;
  - Realistic scope of activities that may be highly complex
  - Many sources and degrees of uncertainty
  - Many accounting judgments
  - Many questions about information usefulness
  - Many stakeholders with divergent interests and complex decisions
  - Many complex and uncertain cause and effect relationships
Homework, group discussion, and/or exam

- Ask students to:
  - Identify the most important factors for the situation
  - Use important factors to create and apply decision criteria

Example for Stage 3 Students

Resources: https://linktr.ee/AICPA

Email Susan: swolcott@WolcottLynch.com
Additional Questions and Discussion

Thank you